

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-29 (Cancelled)

30. (New) A method of communicating, said method comprising:

maintaining a connection, via a network, between a first proxy on a first server and a second proxy on a second server;

while maintaining the connection:

a plurality of first processes on the first server communicating with a plurality of second processes on the second server via the connection by:

the plurality of first processes exchanging data with the first proxy via shared memory, wherein each of the plurality of first processes is assigned a unique region of the shared memory; and

said first proxy transmitting said data via said connection to said second proxy.

31. (New) The method of Claim 30, wherein the plurality of first processes exchanging data with the first proxy via shared memory comprises:

a first process of the plurality of processes writing data to a region of the shared memory that is assigned to the first process; and

the first process causing the state of a process mark device to change to a first state to indicate that the region is not writeable by the first process, wherein the

process mark device has the first state and a second state that indicates that the region is writeable by the first process.

32. (New) The method of Claim 31, wherein the plurality of first processes exchanging data with the first proxy via shared memory further comprises:

prior to the first process writing data to the shared memory, the first process  
determining whether the region of the shared memory is currently writeable by  
the first process.

33. (New) The method of Claim 32, wherein the first process determining whether the region of the shared memory is currently writeable comprises the first process checking the state of the process mark device.

34. (New) The method of Claim 33, further comprising the first process causing the state of a proxy mark device to change to a first state to indicate that the region is readable by the first proxy, wherein the proxy mark device has the first state and a second state that indicates that the region is not readable by the first proxy.

35. (New) The method of Claim 34, wherein the first process causing the state of the proxy mark device to change to the first state comprises the first process writing to the process mark device.

36. (New) The method of Claim 34, wherein the plurality of first processes exchanging data with the first proxy via shared memory further comprises:

in response to the proxy mark device changing to the first state, the first proxy  
determining that there is data to be read from the region.

37. (New) The method of Claim 34, wherein the plurality of first processes exchanging data with the first proxy via shared memory further comprises:

the first proxy reading data from the region; and

the first proxy causing the proxy mark device to change to the second state.

38. (New) The method of Claim 37, further comprising:

the process mark device changing to the second state in response to the proxy mark device changing to the second state.

39. (New) The method of Claim 30, wherein the plurality of first processes exchanging data with the first proxy via shared memory comprises:

a first process of the plurality of processes reading data from a region of the shared memory that is assigned to the first process; and

the first process causing the state of a process mark device to change to a first state to indicate that the region is not readable by the first process, wherein the process mark device has the first state and a second state that indicates that the region is readable by the first process.

40. (New) A communication system, comprising:

a first server comprising:

a plurality of first processes;

a first proxy; and

a first shared memory having a plurality of slots to store first data to be exchanged between the first processes and the first proxy; each slot being assigned to a particular one of the first processes;

a second server comprising:

    a plurality of second processes;

    a second proxy; and

    a second shared memory having a plurality of slots to store second data to be exchanged between the second processes and the second proxy; each slot being assigned to a particular one of the second processes;

wherein the first proxy is configured to maintain a connection, via a network, with the second proxy; and

wherein the first proxy and the second proxy are configured to exchange the first data and the second data via the connection to allow the plurality of first processes to communicate with the plurality of second processes.

41. (New) The communication system of Claim 40, wherein the first server further comprises:

    a plurality of process mark devices, at least one mark device being assigned to each slot to regulate data flow into and out of the slots of the shared memory, and

    a plurality of proxy mark devices, each mark device corresponding to one of the process mark devices,

wherein each process mark device is configured to cooperate with the corresponding proxy mark device to regulate data being inputted to and outputted from the corresponding slot.

42. (New) A computer readable medium having stored thereon instructions, which when executed on one or more processors, cause the one or more processors to perform the steps of:

maintaining a connection, via a network, between a first proxy on a first server and a second proxy on a second server;  
while maintaining the connection:  
a plurality of first processes on the first server communicating with a corresponding plurality of second processes on the second server via the connection by:  
the plurality of first processes exchanging data with the first proxy via shared memory, wherein each of the plurality of first processes is assigned a unique region of the shared memory; and  
said first proxy transmitting said data via said connection to said second proxy.

43. (New) The computer readable medium of Claim 42, wherein the step of the plurality of first processes exchanging data with the first proxy via shared memory comprises:  
a first process of the plurality of processes writing data to a region of the shared memory that is assigned to the first process; and  
the first process causing the state of a process mark device to change to a first state to indicate that the region is not writeable by the first process, wherein the process mark device has the first state and a second state that indicates that the region is writeable by the first process.

44. (New) The computer readable medium of Claim 43, wherein the step of the plurality of first processes exchanging data with the first proxy via shared memory further comprises:

prior to the first process writing data to the shared memory, the first process  
determining whether the region of the shared memory is currently writeable by  
the first process.

45. (New) The computer readable medium of Claim 44, wherein the step of the first  
process determining whether the region of the shared memory is currently writeable  
comprises the first process checking the state of the process mark device.

46. (New) The computer readable medium of Claim 45, wherein the method further  
comprises the step of the first process causing the state of a proxy mark device to change to a  
first state to indicate that the region is readable by the first proxy, wherein the proxy mark  
device has the first state and a second state that indicates that the region is not readable by the  
first proxy.

47. (New) The computer readable medium of Claim 46, wherein the step of the first  
process causing the state of the proxy mark device to change to the first state comprises the  
first process writing to the process mark device.

48. (New) The computer readable medium of Claim 46, wherein the step of the plurality  
of first processes exchanging data with the first proxy via shared memory further comprises:  
in response to the proxy mark device changing to the first state, the first proxy  
determining that there is data to be read from the region.

49. (New) The computer readable medium of Claim 46, wherein the step of the plurality  
of first processes exchanging data with the first proxy via shared memory further comprises:  
the first proxy reading data from the region; and

the first proxy causing the proxy mark device to change to the second state.

50. (New) The computer readable medium of Claim 49, wherein the method further comprises the step of:

the process mark device changing to the second state in response to the proxy mark device changing to the second state.

51. (New) The computer readable medium of Claim 42, wherein the step of the plurality of first processes exchanging data with the first proxy via shared memory comprises:

a first process of the plurality of processes reading data from a region of the shared memory that is assigned to the first process; and

the first process causing the state of a process mark device to change to a first state to indicate that the region is not readable by the first process, wherein the process mark device has the first state and a second state that indicates that the region is readable by the first process.